

**Unit:**  
**325 Hazardous Waste Treatment Units**

**Permit Part & Chapter:**  
**Part III, Chapter 6 and Attachment 36**

Description of Modification:

Part A, Form 3: Replace the Part A, Form 3, Revision 4 with the attached Part A, Form 3, Revision 4A. The Part A, Form 3, was modified to reflect the installation of the Radioactive Liquid Waste Tank system.

Replace Chapter 1.0 with attached Chapter 1.0.

Modification Class: <sup>123</sup>	Class 1	Class <sup>1</sup> 1	Class 2	Class 3
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Please check one of the Classes:	X			
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Relevant WAC 173-303-830, Appendix I Modification: A.1.

Enter wording of the modification from WAC 173-303-830, Appendix I citation

### A. General Permit Provisions

### 1. Administrative and Informational changes.

Submitted by Co-Operator:	Reviewed by RL Program Office:	Reviewed by Ecology:	Reviewed by Ecology:
<i>A.K. Ikenberry</i> 6/23/00	<i>R.F. Christensen</i> 6/29/00	<i>J.J. Wallace</i> 8/18/00	<i>L.E. Ruud</i> 8/18/00
A.K. Ikenberry	R.F. Christensen	J.J. Wallace	L.E. Ruud
Date	Date	Date	Date

<sup>1</sup>Class 1 modifications requiring prior Agency approval.

<sup>2</sup> This is only an advanced notification of an intended Class <sup>1</sup>1, 2, or 3 modification, this should be followed with a formal modification request, and consequently implement the required Public Involvement processes when required.

<sup>3</sup> If the proposed modification does not match any modification listed in WAC 173-303-830 Appendix I, then the proposed modification should automatically be given a Class 3 status. This status may be maintained by the Department of Ecology, or down graded to <sup>1</sup>1, if appropriate.

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<b>Hanford Facility RCRA Permit Modification Notification Form</b>																																																																
Unit: <b>325 Hazardous Waste Treatment Units</b>	Permit Part & Chapter: <b>Part III, Chapter 6 and Attachment 36</b>																																																															
<b>Description of Modification:</b> Part A, Form 3: Replace the Part A, Form 3, Revision 4 with the attached Part A, Form 3, Revision 4A. The Part A, Form 3, was modified to reflect the installation of the Radioactive Liquid Waste Tank system. Section III.C. <u>S01, T04, S02, T01</u>  The 325 Hazardous Waste Treatment Units (325 HWTUs) consist of the Shielded Analytical Laboratory (SAL) which includes Rooms 32, 200, 201, 202, and 203; the Hazardous Waste Treatment Unit (HWTU) encompassing Rooms 520 and 528 of the 325 Building, and the 325 Collection/Loadout Station Radioactive Liquid Waste Tank (RLWT) located in the southeast corner of the basement of the 325 Building. The 325 HWTUs began waste management operations in 1991 (SAL) and 1995 (HWTU). Up to 10,000 liters of dangerous and/or mixed waste may be stored in containers in the 325 HWTUs (S01). A maximum of 1514 liters of dangerous and/or mixed waste may be treated per day in containers in the 325 HWTUs (T04).  Liquid dangerous and/or mixed waste is transferred to tank storage via gravity drain lines located in the SAL (which drain into tank TK-1) and in Room 528 [which drain directly to the radioactive liquid waste system (RLWS)]. Tank TK-1 is drained via a jet system into the RLWS then to the RLWT and The Collection/Loadout Station Tank will be utilized to collect liquid dangerous and/or mixed waste after the RLWS is closed, and will be connected to existing drain lines. This tank will The RLWT transfers collected liquid dangerous and/or mixed waste to a loadout station, where mobile containers will be are loaded to transfer the liquid dangerous and/or mixed waste to the Double-Shell Tank System. A maximum of 12,574 liters of dangerous and/or mixed waste may be stored in tanks in the 325 HWTUs (S02). A maximum of 12,574 liters of dangerous and/or mixed waste may be treated in tanks per day in the 325 HWTUs (T01).  Dangerous and/or mixed waste treatments are generally conducted as small bench-scale operations except for in-tank treatments. Treatment processes utilized at the 325 HWTUs may include the following: <table style="width: 100%; margin-top: 10px;"> <tr> <td style="width: 33%;">T11 Molten salt destructor</td> <td style="width: 33%;">T35 Centrifugation</td> <td style="width: 33%;">T55 Electrodialysis</td> </tr> <tr> <td>T12 Pyrolysis</td> <td>T36 Clarification</td> <td>T56 Electrolysis</td> </tr> <tr> <td>T13 Wet air oxidation</td> <td>T37 Coagulation</td> <td>T57 Evaporation</td> </tr> <tr> <td>T14 Calcination</td> <td>T38 Decanting</td> <td>T58 High gradient magnetic separation</td> </tr> <tr> <td>T15 Microwave discharge</td> <td>T39 Encapsulation</td> <td>T59 Leaching</td> </tr> <tr> <td>T18 Other thermal treatment</td> <td>T40 Filtration</td> <td>T60 Liquid ion exchange</td> </tr> <tr> <td>T21 Chemical fixation</td> <td>T41 Flocculation</td> <td>T61 Liquid-liquid extraction</td> </tr> <tr> <td>T22 Chemical oxidation</td> <td>T42 Flotation</td> <td>T62 Reverse osmosis</td> </tr> <tr> <td>T23 Chemical precipitation</td> <td>T43 Foaming</td> <td>T63 Solvent recovery</td> </tr> <tr> <td>T24 Chemical reduction</td> <td>T44 Sedimentation</td> <td>T64 Stripping</td> </tr> <tr> <td>T25 Chlorination</td> <td>T45 Thickening</td> <td>T65 Sand filter</td> </tr> <tr> <td>T26 Chlorinolysis</td> <td>T46 Ultrafiltration</td> <td>T66 Other removal technology</td> </tr> <tr> <td>T27 Cyanide destruction</td> <td>T47 Other separation technology</td> <td>T67 Activated sludge</td> </tr> <tr> <td>T28 Degradation</td> <td>T48 Absorption-molecular sieve</td> <td>T69 Aerobic tank</td> </tr> <tr> <td>T29 Detoxification</td> <td>T49 Activated carbon</td> <td>T70 Anaerobic lagoon or tank</td> </tr> <tr> <td>T30 Ion exchange</td> <td>T50 Blending</td> <td>T71 Composting</td> </tr> <tr> <td>T31 Neutralization</td> <td>T51 Catalysis</td> <td>T74 Thickening filter</td> </tr> <tr> <td>T32 Ozonation</td> <td>T52 Crystallization</td> <td>T75 Tricking filter</td> </tr> <tr> <td>T33 Photolysis</td> <td>T53 Dialysis</td> <td>T77 Other biological treatment</td> </tr> <tr> <td>T34 Other chemical treatment</td> <td>T54 Distillation</td> <td></td> </tr> </table>					T11 Molten salt destructor	T35 Centrifugation	T55 Electrodialysis	T12 Pyrolysis	T36 Clarification	T56 Electrolysis	T13 Wet air oxidation	T37 Coagulation	T57 Evaporation	T14 Calcination	T38 Decanting	T58 High gradient magnetic separation	T15 Microwave discharge	T39 Encapsulation	T59 Leaching	T18 Other thermal treatment	T40 Filtration	T60 Liquid ion exchange	T21 Chemical fixation	T41 Flocculation	T61 Liquid-liquid extraction	T22 Chemical oxidation	T42 Flotation	T62 Reverse osmosis	T23 Chemical precipitation	T43 Foaming	T63 Solvent recovery	T24 Chemical reduction	T44 Sedimentation	T64 Stripping	T25 Chlorination	T45 Thickening	T65 Sand filter	T26 Chlorinolysis	T46 Ultrafiltration	T66 Other removal technology	T27 Cyanide destruction	T47 Other separation technology	T67 Activated sludge	T28 Degradation	T48 Absorption-molecular sieve	T69 Aerobic tank	T29 Detoxification	T49 Activated carbon	T70 Anaerobic lagoon or tank	T30 Ion exchange	T50 Blending	T71 Composting	T31 Neutralization	T51 Catalysis	T74 Thickening filter	T32 Ozonation	T52 Crystallization	T75 Tricking filter	T33 Photolysis	T53 Dialysis	T77 Other biological treatment	T34 Other chemical treatment	T54 Distillation	
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Hanford Facility RCRA Permit Modification Notification Form																	
Unit: 325 Hazardous Waste Treatment Units					Permit Part & Chapter: Part III, Chapter 6 and Attachment 36												
Description of Modification: Part A, Form 3: Replace the Part A, Form 3, Revision 4 with the attached Part A, Form 3, Revision 4A. The Part A, Form 3, was modified to reflect the installation of the Radioactive Liquid Waste Tank system.																	
Section IV. Description of Dangerous Waste: Corrected typographical error.																	
Line No.	A. Dangerous Waste No. (enter code)					B. Estimated Annual Quantity of Waste	C. Unit of Measure (enter code)		D. Processes								
									1. Process Codes (enter)	2. Process Description (if a code is not entered in D(1))							
485	W	T	0	1		↓		↓	↓								
486	W	T	0	42		↓		↓	↓								
Modification Class: <sup>123</sup> Please check one of the Classes: <table border="1"> <tr> <td>Class 1</td> <td>Class<sup>1</sup>1</td> <td>Class 2</td> <td>Class 3</td> </tr> <tr> <td>X</td> <td></td> <td></td> <td></td> </tr> </table>										Class 1	Class <sup>1</sup> 1	Class 2	Class 3	X			
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Relevant WAC 173-303-830, Appendix I Modification: A.1.																	
Enter wording of the modification from WAC 173-303-830, Appendix I citation																	
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Submitted by Co-Operator:		Reviewed by RL Program Office:		Reviewed by Ecology:		Reviewed by Ecology:											
A.K. Ikenberry 6/23/00 Date		R.F. Christensen 6/29/00 Date		J. J. Wallace 8/18/00 Date		L.E. Ruud 8/18/00 Date											

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Hanford Facility RCRA Permit Modification Notification Form					
Unit: <b>325 Hazardous Waste Treatment Units</b>		Permit Part & Chapter: <b>Part III, Chapter 6 and Attachment 36</b>			
Description of Modification: Part A, Form 3: Replace the Part A, Form 3, Revision 4 with the attached Part A, Form 3, Revision 4A. The Part A, Form 3, was modified to reflect the installation of the Radioactive Liquid Waste Tank system.					
Section IX.: Modified Date Signed block as follows: <u>Revision 4 signed</u> 00/30/1997					
Section X: Modified Date block as follows: Date <u>Revision 4 Signed</u>					
Modification Class: <sup>123</sup>		Class 1	Class 1	Class 2	Class 3
Please check one of the Classes:		X			
Relevant WAC 173-303-830, Appendix I Modification: A.1.					
Enter wording of the modification from WAC 173-303-830, Appendix I citation					
A. General Permit Provisions					
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Hanford Facility RCRA Permit Modification Notification Form				
Unit:		Permit Part & Chapter:		
325 Hazardous Waste Treatment Units		Part III, Chapter 6 and Attachment 36		
<p>Description of Modification:</p> <p>Part A, Form 3: Replace the Part A, Form 3, Revision 4 with the attached Part A, Form 3, Revision 4A. The Part A, Form 3, was modified to reflect the installation of the Radioactive Liquid Waste Tank system.</p> <p><b>Figure 1:</b> Redrawn and identification number for figure updated.</p> <p><b>Figure 2:</b> Redrawn and identification number for figure updated. Modified title as follows: 325 Hazardous Waste Treatment Units</p> <p><b>Figure 3:</b> Revised to denote RPS and RLWS and identification number for figure updated. Modified title as follows: Location of Shielded Analytical Laboratory Tank in Room 32 and <del>Proposed</del> Location of 325 Collection/Loadout Station Tank (basement) of the 325 Building.</p> <p><b>Figure 5:</b> Modified title as follows: <del>Proposed</del> 325 Collection/Loadout Station Tank.</p>				
Modification Class: <sup>123</sup>		Class 1	Class <sup>1</sup> 1	Class 2
Please check one of the Classes:		X		
Relevant WAC 173-303-830, Appendix I Modification: A.1.				
Enter wording of the modification from WAC 173-303-830, Appendix I citation				
A. General Permit Provisions				
1. Administrative and Informational changes.				
Submitted by Co-Operator:	Reviewed by RL Program Office:	Reviewed by Ecology:	Reviewed by Ecology:	
<i>A.K. Ikenberry</i> 4/23/00	<i>R.F. Christensen</i> 6/29/00	<i>J. J. Wallace</i> 8/18/00	<i>L.E. Ruud</i> 8/18/00	
A.K. Ikenberry Date	R.F. Christensen Date	J. J. Wallace Date	L.E. Ruud Date	

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Hanford Facility RCRA Permit Modification Notification Form				
Unit:		Permit Part & Chapter:		
325 Hazardous Waste Treatment Units		Part III, Chapter 6 and Attachment 36		
Description of Modification:				
Part A, Form 3: Replace the Part A, Form 3, Revision 4 with the attached Part A, Form 3, Revision 4A. The Part A, Form 3, was modified to reflect the installation of the Radioactive Liquid Waste Tank system.				
Photograph 1: Modified titles as follows: Hazardous Waste Treatment Units				
Photograph 2: Modified titles as follows: Hazardous Waste Treatment Units				
Photograph 3: Modified titles as follows: Hazardous Waste Treatment Units				
Photograph 6: Corrected identification number for photograph.				
Photograph 8: Corrected the photo taken date as follows: (Photo Taken <del>1979</del> 1996)				
Photograph 9: Replaced photograph with current photograph of installed RLWT. Modified title as follows: <del>Proposed</del> 325 Collection/Loadout Station Tank				
Modification Class: <sup>123</sup>		Class 1	Class <sup>1</sup> 1	Class 2
Please check one of the Classes:		X		
Relevant WAC 173-303-830, Appendix I Modification: A.1.				
Enter wording of the modification from WAC 173-303-830, Appendix I citation				
A. General Permit Provisions				
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Submitted by Co-Operator:	Reviewed by RL Program Office:	Reviewed by Ecology:	Reviewed by Ecology:	
<i>A.K. Ikenberry</i> 6/23/00 A.K. Ikenberry Date	<i>R.F. Christensen</i> 6/29/00 R.F. Christensen Date	<i>J.J. Wallace</i> 8/18/00 J.J. Wallace Date	<i>E.E. Ruud</i> 8/18/00 E.E. Ruud Date	

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For questions or comments, contact Mike Cline at [michael\\_w\\_cline@rl.gov](mailto:michael_w_cline@rl.gov)  
URL: [http://www.rl.gov/rcra/approvals/4.3.1.7\\_rev4a\\_apprvl.html](http://www.rl.gov/rcra/approvals/4.3.1.7_rev4a_apprvl.html)  
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